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TOWNSEND and TOWNSEND and CREW LLP

By: Joelle C. Weller

PATENT

Attorney Docket No. 15283A-008600US
Client Ref. No. LS11-03_947,03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

INGOLF BRAUNE, ET AL.

Application No. 10/579,133

Filed: December 18, 2006

For: SAFETY METHOD AND SAFETY DEVICE FOR A MACHINE,
ESPECIALLY A BENDING PRESS

Customer No. 20350

Confirmation No. 6267

Examiner: Teresa Bonk

Technology Center/Art Unit: 3725

AMENDMENT AFTER FILING OF
APPEAL BRIEF TO CORRECT
DUPLICATE WORDING IN CLAIM 1

San Francisco, CA 94111
May 6, 2009

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Amendment, filed subsequent to the filing of Appellants' Appeal Brief on April 15, 2009, is submitted to correct a typographical error in claim 1, which twice recites the phrase "when a size of the opening gap in the movement direction becomes smaller than the protected zone in the movement direction".

The proposed claim amendment is set forth in the following claim section.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of securing a machine having first and second tool parts that define an opening gap between them; at least the first tool part being movable relative to the second tool part in a movement direction so that during an operating cycle the opening gap is gradually closed, the method comprising generating a protected zone so that it precedes the first tool part and extends over at least a portion of the opening gap in the direction of relative movement, monitoring one of an entire area of the protected zone that is transverse to the movement direction and a periphery of the area with an optoelectronic sensor and generating a danger signal in response to a breach of the protected zone, and when a size of the opening gap in the movement direction becomes smaller than the protected zone in the movement direction, ~~when a size of the opening gap in the movement direction becomes smaller than the protected zone in the movement direction,~~ continuously reducing the size of the protected zone in the movement direction of the first tool part so that during subsequent closing movements of the first tool part substantially the entire opening gap is within the protected zone.

Claim 2 (original): A method according to claim 1 including, during subsequent closing movements, completely deactivating the protected zone after an extent of the protected zone in the movement direction has reached a predetermined minimum.

Claim 3 (original): A method according to claim 1 including dividing a movement speed of the first tool part into a relatively faster, first closing speed and a subsequent, relatively slower second closing speed, and switching from the first closing speed to the second closing speed on the basis of a deceleration ramp or a remaining travel distance for the first tool part established during a preceding test run of the first tool part.

Claim 4 (previously presented): A method according to claim 1 including deactivating at least a portion of the protected zone as a function of the size and/or a geometrical shape of the workpiece.

Claim 5 (original): A method according to claim 4 wherein deactivating occurs after a portion of the workpiece has entered the protected zone.

Claim 6 (original): A method according to claim 4 including determining a position of an upper surface of the workpiece during a test run of the first tool part and then learning and memorizing the position of the upper surface as a contact point between the first tool part and the workpiece.

Claim 7 (original): A method according to claim 1 wherein the machine comprises a bending press.

Claim 8 (previously presented): Apparatus for protecting a dangerous zone of a machine against unwanted entries into the zone comprising first and second tool parts mounted for relative movement of the first tool part in a closing direction towards the second tool part and defining an opening gap between the tool parts, an optoelectronic sensor for monitoring the opening gap including a light emitter for illuminating one of an entire area of the opening gap that is transverse to the closing direction and a periphery of the area with a light beam, a light receiver for receiving the emitted light, and a control unit for generating a danger signal when an intrusion into the protected zone is detected, the light emitter and the light receiver being configured so that when the opening gap becomes reduced as the first tool part moves in the closing direction, the protected zone is continuously reduced in the closing direction and so that during further movements of at least one of the first and second tool parts the entire opening gap is within the protected zone.

Claim 9 (original): Apparatus according to claim 8 wherein the light beam has a cross-section at the light receiver which is greater than and completely illuminates the light receiver.

Claim 10 (original): Apparatus according to claim 7 including means fixedly securing the sensor to the first tool part for movement with the first tool part during an operating cycle of the first tool part.

Claim 11 (original): Apparatus according to claim 8 wherein the receiver comprises a location resolving receiver.

Claim 12 (original): Apparatus according to claim 11 wherein the receiver comprises a CMOS-receiver defining a matrix.

REMARKS

This amendment to claim 1 does not change any aspect of it except that it deletes the second one of the two identical phrases contained in the claim.

Also attached hereto is a revised page 16 of 20 of the Appeal Brief of record which contains the corrected claim 1. It is requested that the attached page 16 of 20 be substituted for the original page 16 of 20 in the Appeal Brief.

Should an entirely new Appeal Brief be required, Appellants request a corresponding notification and the Brief will be promptly filed.

Entry of this Amendment and positive action thereon at an early date is therefore requested.

If it is believed that a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 273-4730 (direct dial).

Respectfully submitted,


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9. CLAIMS APPENDIX

Claim 1 (previously presented): A method of securing a machine having first and second tool parts that define an opening gap between them, at least the first tool part being movable relative to the second tool part in a movement direction so that during an operating cycle the opening gap is gradually closed, the method comprising generating a protected zone so that it precedes the first tool part and extends over at least a portion of the opening gap in the direction of relative movement, monitoring one of an entire area of the protected zone that is transverse to the movement direction and a periphery of the area with an optoelectronic sensor and generating a danger signal in response to a breach of the protected zone, and when a size of the opening gap in the movement direction becomes smaller than the protected zone in the movement direction, continuously reducing the size of the protected zone in the movement direction of the first tool part so that during subsequent closing movements of the first tool part substantially the entire opening gap is within the protected zone.

Claim 2 (original): A method according to claim 1 including, during subsequent closing movements, completely deactivating the protected zone after an extent of the protected zone in the movement direction has reached a predetermined minimum.

Claim 3 (original): A method according to claim 1 including dividing a movement speed of the first tool part into a relatively faster, first closing speed and a subsequent, relatively slower second closing speed, and switching from the first closing speed to the second closing speed on the basis of a deceleration ramp or a remaining travel distance for the first tool part established during a preceding test run of the first tool part.

Claim 4 (previously presented): A method according to claim 1 including deactivating at least a portion of the protected zone as a function of the size and/or a geometrical shape of the workpiece.